

**БОРДИК, А. Organization of a Lighter-than-Air Aerial Methods
Sub-Commission of the All-Union Geographical**

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The brilliant development of the past decade of airplane construction obscured the progress of lighter-than-air (vehicles). Among the lighter-than-aircraft there are dirigibles which continue to operate and on the basis of new techniques have produced interesting results. Hydrogen is substituted now for the inflammable helium and fires on dirigibles are no more and the loading is done in a conventional manner. By comparison (with the older dirigibles the newer) plastics are of importance for their impermeability and durability of cover. Improved controls and the technique of operation of dirigibles are advanced so that catastrophes (formerly) resulting from the aerostatics of the steel (frame now) occur unusually rarely. For long continuous flight without addition of fuel the commands (crews) are changed every eight days.

A striking achievement accomplished among others seems to be further continuing their developments in the branch of lighter-than-aircraft free aerial vehicles. The utilization of the exceptionally light, almost weightless plastic envelopes in place of the previous textile cloth and the aid of automatic features, offers the possibility of an aerial vehicle which is yet to be determined with reference to discovering the mission altitude, these "machines" rise without a crew to heights of 40 kilometers and may stay there over a month. The air current gives the aerial vehicle a possibility of making a voyage around the earth. Thanks to the increased study of

these air currents and the comparative steadiness of them in the stratosphere they may be (used) with sufficient accuracy to travel in a required region with a cargo of 1.0 kilos. Recently there is the anticipated construction of an American type of lighter than air platform by which two specialists and various equipment for the flight will be allowed for a long (time) to soar in the atmosphere indefinitely on an altitude of 30 Kilometers.

A general explanation was presented to the group of the Leningrad members to organize a Sub-Commission. This Sub Commission was organized to refine the problems of the utilization of lighter-than aircraft in the USSR on a first priority for geographic research. On the condition of the large change to geological-prospecting work in the distant, difficult as well as accessible regions of our countries the use of the dirigible would guarantee in these regions an all year cheaper, massive aerial communication. For this is needed a controlled aerial vehicle, for example, the 15 to 30,000 cubic meter type of the American blimp. Taking into account that dirigibles on a smaller scale (5 to 10,000 cubic meters) can be readied for use for varied people + industry works (taxation and protection of forests, search for fish, local transport guidance of ships on the Northern Sea Route, aerial surveys etc), the Sub-Commission can develop work for the utilization of the dirigible for geographical research of regions on a transverse scale of 1 to 2,000 kilometers. For some purposes a satisfactory example "itself smaller" of lighter than aircraft is the dirigible- lilliputs of a size up to 2,000 cu. meters which can act as an aerial vehicle (for archeological research, protection of forests from fires, etc.). The Sub-Commission is investigating the use of

lighter than-aircraft for geological purposes. In the more distant future the use of a dirigible for transport and research purposes on the ~~expanses~~ of the Pacific and Indian Oceans is being considered.

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